

EXHIBIT 18

DECLARATION OF JENNIFER LODGE

I, Jennifer Lodge, declare as follows:

1. I am the Vice President for Research and Innovation (VPRI) at Duke University (Duke) in Durham, North Carolina. I have held that position since January, 2022. Before coming to Duke, I served as the Vice Chancellor for Research at Washinton University in St. Louis, and Senior Associate Dean for Research for the School of Medicine at Washington University in St. Louis. My research has been funded continuously by the federal government for more than two decades.

2. As VPRI at Duke, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by Duke personnel, and could testify thereto.

3. Duke University receives substantial annual funding from the Department of Energy (“DOE”). In FY24 (July 1, 2023 – June 30, 2024), Duke received 68 awards from the DOE, and expended approximately \$23M in DOE funds. Of that total, \$6.5M was for indirect expenditures.

4. The funding Duke receives from DOE supports critical and cutting-edge energy and computing research, which millions of Americans benefit from and depend on, and that are priority areas for this Administration as set forth by President Trump in his March 26, 2025 letter to the Director of the Office of Technology and Science Policy, wherein President Trump expressed the need to “accelerate research and development” to “secure [the United States’] position as the unrivaled world leader in critical and emerging technologies — such as artificial intelligence, quantum information science, and nuclear technology.” Examples of DOE funded research that aligns with the President’s priorities are:

- a. The Triangle Universities Nuclear Physics Lab (TUNL), housed at Duke, is funded through a DOE grant and hosts faculty from Duke, The University of North Carolina at Chapel Hill, North Carolina State University, and North Carolina Central University. It is one of only three DOE centers of excellence. TUNL produces approximately 10% of nuclear physics PhDs in the US, with 18 graduates over the last grant period and 56 graduate students as of January 2024. TUNL provides the facilities for groundbreaking research in the areas of astrophysics, nuclear structure and reactions, neutrinos and applied nuclear physics. TUNL is a unique facility that conducts research that cannot be done anywhere else in the United States. TUNL also provides unique capabilities in medical research in collaboration with Duke's School of Medicine, developing new cures for aggressive brain cancers.
- b. The Quantum Systems Accelerator (QSA) program is one of the five concentrated quantum centers supported through the U.S. National Quantum Initiative. The Duke Quantum Center (DQC) is a major pillar of the QSA as a unique facility that builds and uses quantum computers needed to deliver certified quantum advantage in DOE scientific applications. The first public quantum computing company, IONQ, was spun out of this effort at Duke.
- c. The Duke collider physics group is funded by a DOE grant - this group contains members of the ATLAS collaboration that participated in the discovery of the Higgs boson at the Large Hadron Collider at CERN. The ATLAS collaboration was awarded a share of the 2025 Breakthrough Prize in Fundamental Physics.

- d. The Duke nuclear theory group has multiple DOE grants and has provided mission-critical theory support for a number of signature programs at DOE labs – among them the Relativistic Heavy-Ion Collider at Brookhaven National Laboratory, the Continuous Electron Beam Facility at Thomas Jefferson National Accelerator Facility, and the ALICE experiment at the Large Hadron Collider.
 - e. Projects funded by DOE through Sandia National Labs include “Normal is not normal: Resolving severe mechanical environments” which contributes to the modeling of failure processes in metals under extreme loading conditions and “ACRR Fuel Performance Modeling” which is helping to assess the long-term viability of the Annular Core Research Reactor (ACRR) at Sandia National Laboratories, in Albuquerque. The ACRR is a nuclear reactor that allows researchers to subject various test objects to a mixed photon and neutron irradiation environment featuring either a very rapid pulse rate or a long-term, steady-state rate. This work at ACRR impacts radioisotope production, radiation effects, and neutron research.
5. Indirect costs are essential for supporting this research. The DOE’s proposal to cancel awards with indirect rates higher than 15% and to limit indirect cost recovery to 15% in all future awards only to Institutions of Higher Education would end or seriously jeopardize all of the research projects described in paragraph 4. Duke faithfully accounts to the Department of Health and Human Services (“HHS”), the cognitive agency for these F&A expenses, and only costs that are directly allocable to sponsored research facilities and administration are

included. Duke's F&A rate is generally renewed with HHS every four years and the proposed rate is carefully examined and audited by the Federal government. Duke relies on its longstanding partnership with the Federal government, including DOE, to support the actual costs that are recovered through Duke's F&A rate to complete funded research and meet the associated federal requirements.

6. Indirect costs include costs such as:
 - a. operating and maintaining research facilities with specialized heat, lighting, vacuum, and purified water systems, as well as hazardous waste disposal and security to ensure that radioactivity and hazardous chemicals are securely used, stored and disposed;
 - b. upgrading existing lab facilities where DOE sponsored research occurs, to accommodate the needs for the specialized research and ensure that the plumbing, electric, HVAC, and safety facilities in our laboratories are up to code and safe for Duke researchers and support staff;
 - c. information technology ("IT") networks, high performance computing facilities, and data storage facilities, that enable researchers to analyze large amounts of data, store data in a secure environment when required by the DOE;
 - d. core service facilities, which include high-end equipment, clean rooms and other facilities that no single investigator or project could afford to purchase and maintain, and provide efficiencies across DOE-funded projects; and

- e. compliance offices that have been put in place to fulfill federally mandated requirements, such as laboratory safety, conflict of interest, data security, scientific integrity, financial accounting and auditing, and export controls.
7. With respect to the areas of research described in Paragraph 4:
- a. The TUNL facility requires a significant amount of electrical power, chilled water for its cooling systems, and extensive radiation shielding in the form of modular concrete walls (about a foot in thickness) to facilitate the operation of its accelerators and experiments. Indirect costs cover a significant portion of the expenses associated with providing radiation safety and a controlled environment for TUNL experiments.
 - b. The ATLAS group at Duke University relies on high-capacity computer networking to transfer massive amounts of data from the ATLAS data centers to researchers at Duke for their analysis. Providing state of the art IT infrastructure and fiber networking that allows ATLAS scientists to conduct their analysis is part of Duke's F&A expenditures.
 - c. The nuclear theory group relies on fast fiber networking as well as teleconferencing facilities for its work on computational modeling relevant to the analysis and interpretation of results from experiments at BNL, TJNAF and CERN. This IT and collaborative infrastructure is covered by indirect costs.
8. Physical space costs are one of the largest components of indirect costs, and the amount of space available to researchers has a direct and obvious impact on the amount of research that can be done at Duke University. A loss of the awards and/or the indirect cost recovery to support the Duke Quantum Center (DQC) and

the Triangle University Nuclear Laboratory (TUNL) facility would have significant impacts. Duke is one of only universities in the world building and using programable quantum computers, and the DQC is in specialized space that was specifically renovated and maintained for quantum computers. A substantial reduction in the indirect costs, would mean that Duke may no longer be able to maintain the space, resulting in relocation and consolidation of research space, and a decrease in research productivity as well as the loss of the \$15+M that was expended on renovations to the current space. The TUNL facility is a consortium of four universities that focuses on nuclear physics which is another high priority research area for the federal government. Due to the high amounts of radioactivity used in this facility, the security and facilities are expensive to build and maintain, and Duke's ability to maintain this facility long term may be jeopardized by this reduction.

9. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as DOE.¹ These mandates serve many important functions, including ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing intellectual property, technologies, or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

¹ <https://grants.nih.gov/grants/policy/nihgps/nihgps.pdf>

10. Recovery of Duke University's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government. Duke University has for decades worked closely with the Federal government on research budgeting and planning in our shared goal of producing world-class research. Operating budgets are built on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), equipment purchases, and facility operation and maintenance. And in some cases, Duke has long-term obligations—for example, funding admitted PhD students, paying the depreciation and interest on research facilities where federally funded research is performed—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

11. Through fiscal year 2028, the predetermined indirect cost rates are 61.5% for Duke University. The impact of a reduction in the indirect cost rate would be significant. Of the \$23M in DOE funding that Duke University received in FY24, approximately \$16.5 million was expended on direct costs and \$6.5 million on indirect costs. Because the “administrative” portion of the F&A. is capped at 26%, Duke currently spends 5% of its own funds on unreimbursed, but allowable, administrative expenditures associated with DOE grants. In fiscal year 2025, Duke expects to a similar amount as FY24.

12. If—contrary to what Duke has negotiated with the federal government—the indirect cost rate is reduced to 15% for DOE, that would reduce the University's anticipated annual indirect cost recovery by at least \$4M. While \$4M may be smaller than some of our peer universities, the change would nonetheless have serious consequences now. The University budgets very carefully and the DOE policy does not just apply in 2025 but, if not enjoined, to

future years as well. This means Duke must adjust not just in the near term, but also for the next several years. This means deciding *now* to cease projects, reduce head count, and continue to operate facilities.

13. This reduction will have deeply damaging effects on Duke's ability to conduct DOE funded research.

14. In addition to the immediate impacts and reliance interests described above, there are longer term impacts that are both cumulative and cascading. If Duke can no longer afford to maintain and secure buildings, the safety of the faculty, staff and trainees in those building will be jeopardized. When a project is cancelled, personnel funded on that project are let go and their expertise goes with them. The project cannot be restarted without significant loss of time in hiring and training new personnel. In addition, any long-term project may have a data collection interruption, reducing the validity of the result.

15. Disruptions to Duke's research will negatively affect the Durham area, the Research Triangle region, the State of North Carolina, and the South. Duke is the largest employer in Durham County and the second largest private employer in North Carolina. Approximately 47,000 North Carolina residents are directly employed by Duke University and Duke University Health System—and both entities collaborate with state and local partners, including North Carolina state universities and nonprofit research enterprises such as the Research Triangle Institute, to help solve regional challenges through joint research and innovation. Duke's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. Duke personnel and inventions have launched 126 active start-ups which raised over \$2.4B in funding in the past five years. Over 65% of Duke start-ups in the past five years have been located in North Carolina and

a massive reduction in Duke's research budget would immediately and seriously jeopardize these contributions to the local region.

16. Finally, slowdowns or halts in research by Duke and other American universities creates a serious risk that competitor nations that are maintaining their investments in research will surpass the United States on this front, threatening both our Nation's national security and its economic dominance. Offers of employment to our NIH-funded investigators from institutions in other countries will be highly attractive, and we will lose our best and brightest scientists to other nations.

17. Nor can Duke cover the funding gap itself. While Duke maintains an endowment, it is neither feasible nor sustainable for Duke to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

a. The majority of Duke's endowment—around 72%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. Duke is not legally permitted to use those funds to cover research infrastructure costs.

b. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.

c. As a non-profit institution, Duke reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps.

18. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on Duke, which would in turn force reductions in key investments supporting Duke's faculty, students, staff, research,

and teaching infrastructure, as well as other critical activities needed to maintain Duke's academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13, 2025, at Durham, North Carolina.

/s/ Jennifer Lodge

Jennifer Lodge